

Original article

Job Satisfaction and Associated Factors among Registered Nurses in Medical College Hospitals

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Abstract:

Job satisfaction among registered nurses has become a burning matter in the medical care sectors, mainly for the public hospitals in Bangladesh. Literature is evident that little is known regarding the associated reasons that influence registered nurses' job satisfaction. **Objective:** Aim of this study was to identify the predictive power of intrinsic motivation, extrinsic motivation, servant leadership of head nurses, marital status, educational level, and, years of work experience on job satisfaction among registered nurses at medical college hospitals in Bangladesh. **Methods:** Cross sectional research design was employed to inspect the job satisfaction and associated factors among registered nurses at medical college hospitals in Bangladesh. Sample size was determined by power analysis using G* Power to recruit 286 registered nurses from 8 divisional medical college hospitals. Data collection was conducted from April 2017 to September 2017, using the English version job satisfaction scale, intrinsic motivation instrument, extrinsic motivation instrument and servant leadership assessment instrument. Multiple classification analysis was used to examine the predictive powers of registered nurses' marital status, educational level, years of work experience, intrinsic motivation, extrinsic motivation, and servant leadership of head nurses on the levels of job satisfaction among registered nurses. **Results:** Findings of the study revealed that extrinsic motivation and servant leadership of head nurses significantly affect registered nurses' job satisfaction. Registered nurses who are highly extrinsically motivated and their head nurses have higher servant leadership practices tend to be highly satisfied with their job. **Conclusion:** The results in this study suggest that hospital administrators can promptly enhance extrinsic motivation which includes senior management, supervisor effectiveness, co-worker relationships, and satisfaction with salary and benefits. In addition, administrators should promote servant leadership of head nurses in order to enhance nurses' job satisfaction in medical college hospitals of Bangladesh.

Keywords: Registered nurse, Head nurse, Job satisfaction, Servant leadership

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Introduction

Job satisfaction has been documented to be a powerful component associated with registered nurses turnover or intent to go away.¹ The study revealed that nurses with lower job satisfaction demonstrate 65% lower possibility to remain on their present job contrasted with nurses with greater job satisfaction.¹ In facing these conditions, job satisfaction among nurses has

appeared as a main apprehension for the medical service administrators globally.^{2,3,4,5,15} Therefore, job satisfaction in registered nurses should be emphasized so as to avoid costly and prolonged replacements.² Job satisfaction of hospital personnel is a significant factor in constructing employee motivation and competence as privileged job satisfaction leads to improved performance and better satisfaction

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among patients. Consideration of job satisfaction among registered nurses and its causative factors are essential for any hospital care association to survive and thrive.³ According to extensive literature review, most researchers emphasize intrinsic motivation, extrinsic motivation,^{4,5,6,7,8} servant leadership,^{9,10,26} marital status, educational level,^{9,11,12} and years of work experience^{9,12,13,14} as being connected to registered nurses' job satisfaction.

Registered nurses job satisfaction has become an excited matter for medical care sectors, mainly for the public hospitals in Bangladesh.¹⁵ Hospitals are swamped with a multiplicity of difficulties such as weak care conveyance framework, shortage of staffing, poor allocation of accountability and outstanding burden, and insufficient opportunity for individual and organizational advancement.^{15,16} According to Bangladesh Health Watch, the doctors-nurse ratio in Bangladeshi hospitals is 3:1 while the international standard is 1:3. One study also accounted that there was a shortage of 280,000 nurses in Bangladesh.¹⁵ Most experts consider that the current staffing deficiency along with poor workplace atmosphere, tremendously impede the upgrade of nursing care and job satisfaction along with health care suppliers, mainly registered nurses in Bangladesh.^{15,16}

There have just been four past investigations which investigate job satisfaction among staff in Bangladesh.^{15,16} One study concluded that nurses' job satisfaction in Bangladesh was very low.¹⁵ Hossain found that 63% of nurses were disappointed with their activity in one government health care facility and one non-government hospital.¹⁴ Numerous studies establish a medium level of job satisfaction among nurses.^{15,16,26} Moreover, there has just been one study exploring transformational leadership and another study on servant leadership of head nurses.^{15,16} Akter, et al., established that there is reasonable level of transformational leadership among nurse supervisors.¹⁶ Ahmed et al., found an extreme level of servant leadership among head nurses and there was a positive connection among head nurses' servant leadership as distinguished by registered nurses.¹⁵

Literature suggests that very little is known regarding associated reasons that influence registered nurses' job satisfaction. Therefore, factors influencing job satisfaction among registered nurses are crucial for further development in this field and mitigation of gaps. In this regard, authors evaluated the factors affecting job satisfaction among registered nurses in Government medical college hospitals of Bangladesh.

Literature Review

Job satisfaction in registered nurses must be focused on so as to avoid costly and time consuming.⁴ It is believed that pleased nurses are more productive, imaginative, as well as dedicated in the directions of the occupation and the institution.²¹ On the contrary, nurses who are not satisfied with work can cause fewer activities, poor output, and huge registered nurses quit the job.^{21,30} Job satisfaction of the hospital personnel is a significant factor in building employee motivation and competence as favorable job satisfaction leads to healthier performance and better satisfaction level among patients.³

Consideration of job satisfaction among registered nurses and its causative factors are essential for any hospital care association to survive and thrive.³ Job satisfaction is defined as the emotional directions with respect to the people toward work jobs which they are currently involved in.²¹ According to extensive literature review, the following factors including intrinsic motivation, extrinsic motivation, servant leadership, marital status, educational level, and years of work experience were mostly associated with registered nurses' job satisfaction.^{3,4,15,21,30}

Intrinsic motivation encourages individuals toward superior effort and performance.⁴ Intrinsic motivation can also be described as growth factors. A number of empirical studies revealed positive connection between intrinsic motivation and nurses' job satisfaction.^{5,6,22} Work itself and recognition have been optimistically linked with overall job satisfaction among registered nurses.²³ Furthermore, intrinsic motivation is a strong predictor of employee job satisfaction,¹⁵ and accounts for 42.6% of discrepancy in overall job satisfaction.³¹

Extrinsic motivation or continuance factors, if absent, can cause unhappiness.⁴ A number of studies showed that extrinsic motivation carries 34.7% predictability on overall job satisfaction.^{5,6,31} Studies also revealed that effective supervision, healthy relationship with co-workers, and satisfaction with benefits are significant predictors of overall job satisfaction.^{6,31}

Patterson defined "servant leadership as the characteristic of leaders who lead an organization by focusing on their followers, such that the followers are the primary concern and the organizational concerns are peripheral." Several studies have identified that servant leadership has an optimistic connection with job satisfaction.^{10,15,26}

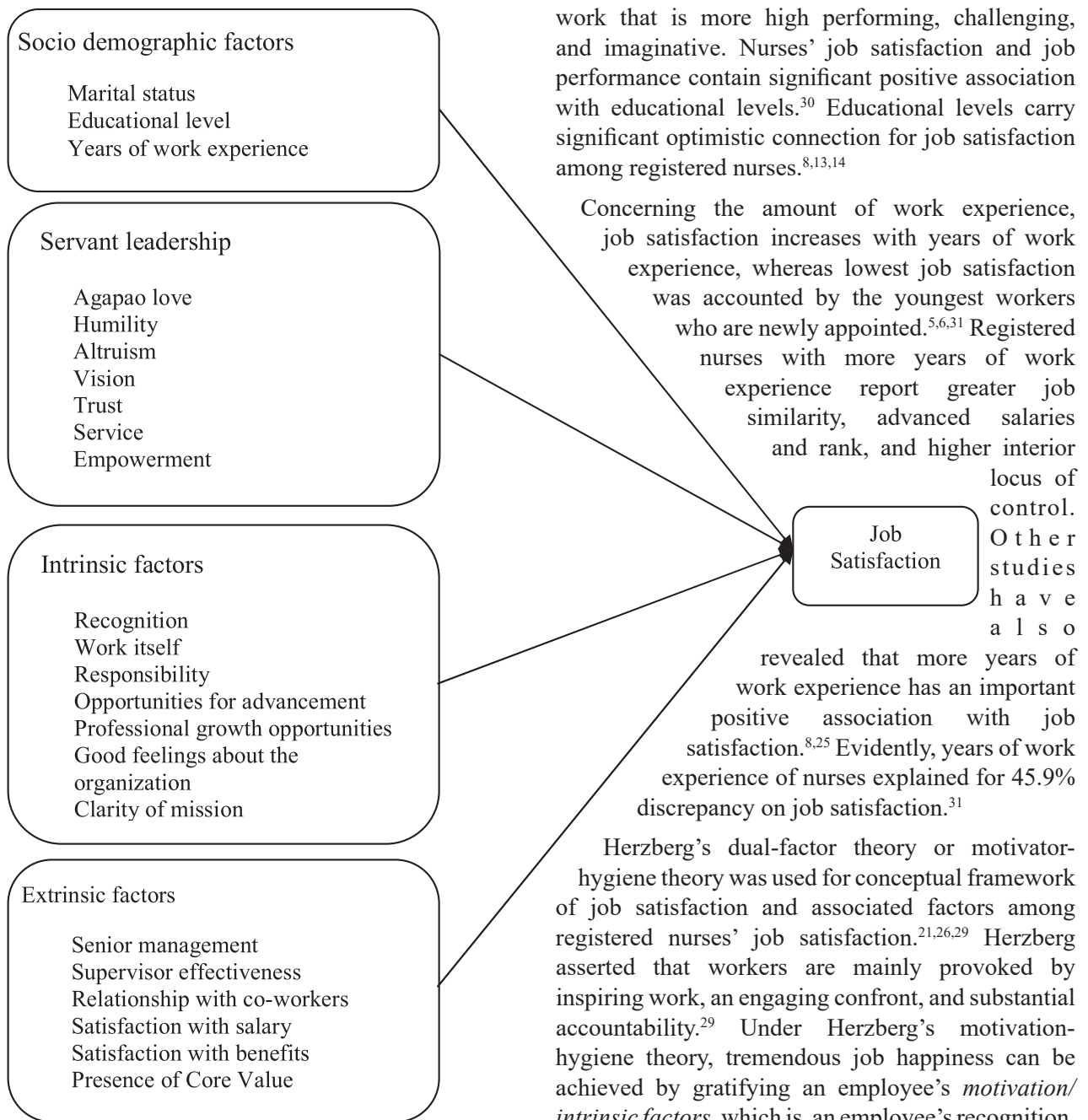


Figure 1.1 Conceptual framework of the study

Worldwide, literature revealed that high marital eminence is directly proportional to high job satisfaction.^{13,14,15} On the other hand, marital status has significant positive association with job satisfaction among registered nurses.^{8,12,13,14} Alternatively, educational level holds an important position in determining job satisfaction.²⁴ It has been indicated that job satisfaction tends to be higher with increasing level of education.³¹ The higher the nurses' education, better the opportunity for good

work that is more high performing, challenging, and imaginative. Nurses' job satisfaction and job performance contain significant positive association with educational levels.³⁰ Educational levels carry significant optimistic connection for job satisfaction among registered nurses.^{8,13,14}

Concerning the amount of work experience, job satisfaction increases with years of work experience, whereas lowest job satisfaction was accounted by the youngest workers who are newly appointed.^{5,6,31} Registered nurses with more years of work experience report greater job similarity, advanced salaries and rank, and higher interior locus of control. Other studies have also revealed that more years of work experience has an important positive association with job satisfaction.^{8,25} Evidently, years of work experience of nurses explained for 45.9% discrepancy on job satisfaction.³¹

Herzberg's dual-factor theory or motivator-hygiene theory was used for conceptual framework of job satisfaction and associated factors among registered nurses' job satisfaction.^{21,26,29} Herzberg asserted that workers are mainly provoked by inspiring work, an engaging confront, and substantial accountability.²⁹ Under Herzberg's motivation-hygiene theory, tremendous job happiness can be achieved by gratifying an employee's *motivation/intrinsic factors*, which is, an employee's recognition, responsibility, duties, opportunities for advancement, professional growth opportunities, good feelings about the organization, and clarity of mission.²⁹ While *hygiene/extrinsic factors* act to mitigate feelings of job satisfaction, if unfulfilled, can lead to extreme job dissatisfaction.²⁹ Extrinsic factors are described as: senior management, effective supervisors, good relationship with co-workers, satisfaction with salary & benefits, and presence of core value.^{27,30} On the other hand, empirical evidence showed that servant leadership factors can strongly predict registered nurses' job satisfaction.^{8,9,10} Consequently, the following figure (Figure 1.1) is shown as the conceptual framework of this study

Therefore, the aim of the study was identified predictive power of marital status, educational level, years of work experience, intrinsic motivation, extrinsic motivation, and servant leadership of head nurses on job satisfaction among registered nurses in medical college hospitals of Bangladesh.

Materials and methods: A cross sectional research design was used. Registered nurses were recruited with the following inclusion criteria: being both male and female, being employed in the selected hospital for at least one year and working in a current unit for at least three months and providing direct nursing care to the patients during their hospitalization, willing to signed informed consent and to join in the study.

The sample size was projected using G* Power program version 3.1.9.2. For multiple classification analysis required sample size depends on the preferred power, a significance level, number of predictors and effect size.²⁸The preferred power .80, the significance level .05 and the effect size (f^2) approximately .05 was set.³¹According to the calculation, the number of participants required is 279. In consideration, of possible incomplete data minimum, about 10 percent of the sample size was added up. As a result, the total number of sample was 307 registered nurses. But the researcher could access 300 registered nurses which is adequate to conduct the data analysis.²⁸Consequently, 14 registered nurses excluded from the study because observation data of these subjects markedly deviated from other observations in the sample and have been referred as outliers that may indicate bad data for statistical analysis. Finally, 286 registered nurses remained for analysis.

Data analysis:The frequency, percentage, mean and standard deviation were utilized to investigate demographic data. The average scores of intrinsic motivation, extrinsic motivation, servant leadership of head nurses, and job satisfaction of registered nurses, were analyzed using mean, and standard deviation. Multiple classification analysis (MCA) was used to examine the predictive powers of marital status, educational level, years of work experience, intrinsic motivation, extrinsic motivation, and servant leadership of head nurses on job satisfaction among registered nurses. Prior to conduct MCA, outliers and interaction effect between the predictors were checked. Both assumptions were met.

Research instruments: The authors obtained permission to use the research instruments from the instrument developer through email communication. A demographics data form was developed to obtain information such as age, gender, marital status, educational level, and years of experience of registered nurses. All instruments were translated into Bengali language using the back-translation method (Brislin, 1970). In this process, the researchers used three bilingual translators. The results showed that the translated version and original English version were congruent.

Reliability of the all instruments (job satisfaction scale, intrinsic motivation instrument, extrinsic motivation instrument, and servant leadership assessment instrument) Bengali version was tested using the test-retest method with 20 conveniently selected participants having similar inclusion criteria as the study participants. The internal consistency was .87, .89, .88 and .89.

Ethical clearance: This study was accepted by the Ethics Review Board of the Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Thailand (Approval number MURA2017/72). All potential contributors were informed vocally and in writing of the purpose of the study, techniques, possible threats and profit of involvement, and length of the study. All potential contributors were also informed that their contribution was voluntary and they had the right to refuse or take out from the study at any moment without any penalty. Furthermore, participants' were reassured that their answers were reserved confidential, their individualities were not exposed on study reports and publications of the study and the questionnaires paper was destroyed after been analyzed. Written informed consent was gained after the participants granted to contribute in the study and assent was gained from the participants.

Results:

The age of registered nurses in this study ranged from 24 to 58 years old with a mean of 38.42. Majority of them (83%) were female, (89.50%) was married. Near about one third (68.50%) had a diploma in nursing educational level. Years of work experience of them ranged from 2-10 years (55.00%), 11-20 years (35.00%), 21-30 years (8.00%) and above 30 years (2.00%) (Table 1).

Table 1: Demographic Characteristics of Sample Registered Nurses

Demographic Characteristics	Frequency	Percentage
Age (Min-Max =24-58, <i>M</i> = 38.42, <i>SD</i> = 6.76, <i>Mdn</i> = 38)		
Less than 30	25	8.74
30 - 39	144	50.34
40 - 49	99	34.61
50 and above	18	6.31
Gender		
Male	48	17.00
Female	238	83.00
Marital Status		
Married	256	89.50
Non married	30	10.50
Educational level		
Diploma	196	68.50
Higher than Diploma	90	31.50
Years of work experience (Min-Max = 2-35, <i>M</i> = 10.70, <i>SD</i> =7.88, <i>Mdn</i> =7.00)		
2-10	158	55.00
11-20	100	35.00
21-30	23	8.00
31-40	5	2.00

The level of Intrinsic motivation was at a high level (Mean = 143.61, SD = 12.61). Only two dimensions were at moderate level namely opportunities for advancement (Mean = 16.00, SD = 2.80) and professional growth opportunity (Mean = 20.00, SD = 3.14)(Table 2). Extrinsic motivation was also at a high level (Mean = 164.05, SD = 11.17). Out of six dimensions, there were two dimensions (senior management, satisfaction with benefits) revealed moderate level of extrinsic motivation and four dimensions (effective supervisor, good relationship with co-workers, satisfaction with salaries and presence of core values) expressed high level of extrinsic motivation (Table 2). “Servant leadership of head nurses was at a high level (Mean= 4.39, SD

= .55). All dimensions of servant leadership were at a high level”. Overall registered nurses job satisfaction was at a high level (Mean = 12.05, SD = 1.90)(Table 2).

Table 2 Descriptive statistics of the study variables (*N* = 286)

Variables	Possible Range	Actual Range	Mean	SD
Intrinsic motivation	0-204	104-172	144.12	12.92
- Recognition	0-30	7-27	20.56	3.36
- Responsibility	0-30	9-27	20.85	2.90
- Work itself	0-24	7-24	16.43	2.42
- Opportunity for advancement	0-24	5-22	15.62	3.02
- Professional growth opportunity	0-30	8-26	19.26	3.52
- Good feelings about organization	0-30	11-27	20.04	3.03
- Clarity of mission	0-36	14-34	24.44	3.11
Extrinsic motivation	0-228	110-199	163.85	11.59
- Senior Management	0-18	5-16	11.97	1.27
- Effective supervisor	0-90	24-80	64.66	5.41
- Good relationship with co-worker	0-48	25-42	34.38	2.49
- Satisfaction with salary	0-30	15-28	21.42	2.15
- Satisfaction with benefits	0-24	0-20	16.00	3.86
- Presence of core value	0-18	5-17	13.04	1.94
Servant leadership of head nurses	0-252	143-205	185.18	8.64
- Agapao love	0-36	16-34	26.80	1.99
- Humility	0-36	08-34	26.41	3.07
- Altruism	0-36	14-31	26.06	2.33
- Vision	0-36	13-30	26.44	2.06
- Trust	0-36	20-31	26.46	1.66
- Service	0-36	21-34	26.66	1.70
- Empowerment	0-36	15-34	26.49	2.08
Job Satisfaction	0-18	5-18	12.05	1.90

In MCA model, the independent variables are separated by main effects and covariate effects based

on the scale of measurement of the study variables. There were two main effects of marital status and educational level and four covariate effects of years of work experience, intrinsic motivation, extrinsic motivation, and servant leadership of head nurses on job satisfaction among registered nurses. Marital status is classified into two groups including married and non-married. Educational level is sub-divided into two groups including diploma and higher than a diploma.

Results of multiple classification analysis (MCA) indicated that job satisfaction between married and non-married registered nurses was not statistically different at $p > .05$ ($F = 1.93$; $p = .166$) and marital status explain only 0.70% and 0.80% of the variance in job satisfaction. Additionally, job satisfaction between diploma and higher than diploma registered nurses were not statistically different at $p > .05$ ($F = .179$; $p = .182$) and educational level could explain only 0.50% and 1.40% of the variance in job satisfaction. In conclusion, marital status and

educational level could not predict job satisfaction among registered nurses significantly ($p > .05$).

Considering the covariate effects, extrinsic motivation, and servant leadership of head nurses could predict job satisfaction among registered nurses significantly ($p < .05$). In regard to the years of work experience and intrinsic motivation are not statistically significant predictors of job satisfaction ($p > .05$). A total variance in job satisfaction which jointly explained was equal to 5.20% (Tables 3 & 4).

Discussion:

According to the result of MCA, registered nurses intrinsic motivation, extrinsic motivation, servant leadership of head nurses, marital status, educational level, and year of work experience were jointly accounted for 5.2% of the variability in registered nurses job satisfaction. These two predictors were statistically important predictors of registered nurses job satisfaction among the Medical College Hospitals of Bangladesh, with extrinsic motivation ($p < 0.05$), and servant leadership ($p < 0.05$) and rest of all predictors (marital status, educational level, year of work experience, and intrinsic motivation) were not statistically important predictors on job satisfaction.

Extrinsic motivation was the best significant predictor on job satisfaction in this research. Result of the study revealed that registered nurses who are highly extrinsically motivated, have higher job satisfaction. This result was congruent with some previous studies^{19,30,34} which revealed that extrinsic motivation has a positive association with job satisfaction and extrinsic motivation can predict job satisfaction.¹⁹ One study stated that good relationship with co-worker means higher extrinsic motivation which linked to higher job satisfaction.²⁸ Furthermore, effective supervision from nursing supervisors and constructive feedback when nurses face difficulties can enhance job satisfaction and good relationship with co-worker³⁵ such as, increased trust, respect, and teamwork. When a new co-worker joins the unit, nurses welcome and collaborate viably with different workgroups or divisions which leads to higher job satisfaction.¹⁹ Simultaneously, when nurses get more salary and attractive benefits package as extrinsic motivation from their hospital compared with other similar category jobs in the same hospital, they feel valued and more satisfied with their job. This finding supports the theoretical stance of Donabedian who suggested that nurses who are highly extrinsically motivated tend to be highly satisfied with their job.³³

Table 3 Main effects, covariate effects, and interaction effects of associated factors on job satisfaction among registered nurses ($N = 286$)

Effects	SS	df	MS	F	p
Main effects					
Marital status	6.71	1	6.71	1.93	.166
Educational level	6.24	1	6.24	1.79	.182
Covariate effects					
Years of work experience	.79	1	.79	.23	.635
Intrinsic motivation	3.25	1	3.25	.93	.335
Extrinsic motivation	22.95	1	22.95	6.59	.011
Servant leadership of head nurses	14.11	1	14.11	4.05	.045
Interaction effects					
Marital status*Educational level	11.47	1	11.47	3.29	.071
Model	65.51	7	9.36	2.69	.010
Error	968.70	278	3.49		
Total	1034.21	285	3.63		

SS = Sum of squares; df = degree of freedom; MS = Mean Square

Table 4 Primary effects of marital status and educational level on job satisfaction among registered nurses when controlling for years of work experience, intrinsic motivation, extrinsic motivation, and servant leadership of head nurses ($N = 286$)

Effects	Unadjusted mean	Unadjusted deviation	Eta ² /Eta ²	Adjusted mean	Adjusted deviation	Beta/Beta ²
Marital status			.081/.007			.091/.008
Married (n = 256)	12.00	-.05		11.99	-.06	
Unmarried (n = 30)	12.50	.45		12.56	.51	
Educational level			.068/.005			.118/.014
Diploma (n = 196)	12.96	0.91		11.90	-.15	
Higher than diploma (n = 90)	12.24	.19		12.38	.33	
Grand mean = 12.05; R = .229; R ² = 5.20%						

Servant leadership of head nurses is a significant predictor of job satisfaction. This means when head nurses demonstrate higher levels of servant leadership, registered nurses' job satisfaction increases, as a result, they provide better performance. However, additional reasons may be head nurses' with high servant leadership encourages employees to apply critical reflection to facilitate new understandings. Moreover, head nurses with leadership roles in helping their organization's staff backing and advancement program, plan to decrease pressure, illness and absenteeism among colleagues satisfy their job. Successful leaders can develop an environment to motivate those employees who are not motivated to achieve organizational goals. Ultimately, the objective of any healthcare association will manipulate the staff nurses' job satisfaction through good nursing leadership. Servant leadership remains important for conveying a high level of performance.³⁶ In the event that head nurses give an apparent depiction of the vision and mission to registered nurses and demonstrate them how to accomplish their regular vision, enrolled attendants can have a decent understanding the goal and acting arrangement, in this way making it easy to apply for their job and give better care. This finding

was steady with the consequence of Ahmed et al. in that servant leadership of head nurses had strong effects on registered nurses job satisfaction.¹⁵ Several studies revealed that head nurse who practices better servant leadership behavior in their unit; registered nurses were more satisfied with their job.^{15,36} Head nurses authorize registered nurses in their aptitudes to advance capability together in nursing practice and personality improvement. Through trust, head nurses give a few accountabilities to their colleague to complete that job. Head nurses consider that a responsible individualis somebody who can be trusted and make sure that trust won't be separated or sold out in this manner they are more satisfied with their job. Service to others is the underlying rule for servant leadership. Greenleaf (1977) considered that a servant leader to be a worker foremost before turning into a leader. Head nurse, as a servant leader, deals with other people groups' needs above their own and create a pleasurable atmosphere.

Registered nurses' marital status is not a significant predictor of job satisfaction. Therefore, this part of the hypothesis was not supported by the findings of this study. This result was incongruent with previous studies^{12,16} which found marital status has significant

predictive relationship with job satisfaction. This result also inconsistent with the results of a number of quantitative studies^{18,19,37} which revealed that marital status influences job satisfaction and also mentioned that nurses' who were married and have children they provide good nursing care and more satisfied because when nurses were engaged his/her duty, their spouses take care their children and family. This can be explained that the sample of this study was homogeneous means nearly 90% of registered nurses were married and only 10% were unmarried. Other reason might be Muslim culture because nearly 90% population of Bangladesh are Muslim and within 20 to 25 years of old, most of the women's get married since the major portion of the nurses (95%) are women.

Education level as demographic factors in the Quality of Health Care Model was not significant predictor on registered nurses' job satisfaction. This finding was not similar with previous studies^{16,18,25} in that nurses who hold associate degree are more satisfied with their jobs than those who hold a diploma and baccalaureate degree and also revealed positive connection among education level and nurses' job satisfaction. Result of this study also found education level had a significant predictive relationship with registered nurses' job satisfaction.³⁷This can be attributed to the fact that the sample of this study was homogeneous means nearly 70% of registered nurses education were diploma level and only 10% were higher than a diploma level. Other justification might be they have limited opportunity for higher education of nurses. In Bangladesh, only four post basic B.Sc. nursing colleges started a few years before and every year only 500 registered nurses get the opportunity for an advanced education like B.Sc. nursing. Another reason, before five years it was only one nursing college produces post basic B.Sc. nursing and was only 125 nurses had opportunity each year.

Consequences of this research exposed that registered nurses' years of work experience had a non-significant predictive relationship on job satisfaction. This finding was steady with the study of¹⁶ which exposed that few year of work experience of nurses was at a high level of job satisfaction, where registered nurses had a moderate level of job satisfaction with more years of work experience. On the other hand, this result was incompatible with the studies^{12,33,32,37} found more years of work experienced registered nurses were more satisfied than younger registered nurses with their job. Possible reason

might be no change in their entry position of nurses in Bangladesh. In Bangladesh, when registered nurses enter their government job, after 30 to 35 years they hold the same position with no promotions during the whole time. Therefore, nurses with more years of experience were less satisfied with their job. Another reason might be there are some professions that are lower in grade but more acceptable (medical assistant, family welfare visitor) of Bangladesh compared to the nursing profession.

Moreover, the finding revealed that registered nurses' intrinsic motivation is not a significant predictor of job satisfaction. This part of hypothesis was not congruent with the result of the studies^{12,19,29} that found intrinsic motivation was able to predict 61%, 42.7%, 47% variance on job satisfaction and intrinsic motivations were positively correlated with job satisfaction.^{19,34} Intrinsic motivation does not consider covariates on job satisfaction such as the self-satisfaction of government service nurses with no interest in further individual development. Another reason may be Bangladesh is a Muslim country and most of the nurses also Muslim and they live with joint family (husband, children, father and mother in law, sister and brother in law), play a vital role with their family, and take care of their children and other family members that is why they cannot think about further development.

In the context of the Bangladeshi work environment and culture, nurses may not be satisfied with their job because nurses are not socially valued and honored as a professional. Till today, Bangladeshi culture is not so sophisticated that society can easily accept a woman who works outside especially at night. Moreover, general people still believe that nursing is not a profession that can take the decision for the treatment of their patients independently. They work mostly by following doctors' order. On the other hand, might be this instrument was developed for measuring business related officials job satisfaction and not for nurses. Therefore, registered nurses' intrinsic motivation did not have significant predictive power on job satisfaction. It needs to be examined in further study.

Limitation:

The sample was chosen by using convenient sampling from the 8 divisional medical college hospitals, thus limiting the generalizability of the findings to a more diverse population. These research findings cannot be generalized to the registered nurses' who are

functioning at dissimilar levels and in the additional locations of the country.

Conclusion and recommendation:

The results of the study are useful for intensifying knowledge regarding registered nurses who have a lower level of job satisfaction. This study confirmed that registered nurses' marital status and educational level were homogeneous, and more years of work experience and high level of intrinsically motivated nurses have lower job satisfaction. From the findings of this study, extrinsic motivation and servant leadership of head nurses were significant predictors on job satisfaction. Results of this study suggest that hospital administrators should promptly enhance extrinsic motivation covering senior management, supervisor effectiveness, relationship with co-workers, and better salary and benefits for registered nurses. Moreover, they should promote servant leadership of head nurses in order to increase nurses' job satisfaction in medical college hospitals of Bangladesh.

On the other hand, only 30% of registered nurses educational level was higher than a diploma. In view of that, health care policymaker should take initiative for establish post basic nursing college in every administrative division and produce more educated registered nurse and develop strategies to enhance more satisfied nurses in all health care

settings of Bangladesh such as, to conduct in-service education for nurses, arrange the nursing pre and post-conference, and support nurses for higher education. This information may provide important substantiation and this study is predictive correlational research design, therefore, it would be meaningful to explore further study the registered nurses with a number of open-ended questionnaire, in-depth interviews or focus group interviews to establish the actual situations or judgments about the same factors influencing registered nurses job satisfaction and also other factors.

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Authors' contribution:

Data gathering and idea owner of this study: Sammir Ahmed, RP, PO, JW

Study design: SA, RP, PO, JW

Data gathering: SA

Writing and submitting manuscript: SA, RP

Editing and approval of final draft: SA, RP, PO, JW

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